



The Association of Foreign Banks

Management Information Systems **SURVEY 2011**

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Foreword

The results of the Management Information Systems Survey will be presented for the first time at the Association of Foreign Banks (AFB) Operations Conference in September 2011 entitled "After the Storm". The storm to which the title refers is, of course, the one associated with the 2008 credit crunch and not the new maelstrom being experienced by the financial world in 2011. After the 2008 event banks' shareholders, their management teams and their regulators rightly demanded more information about banking operations to mitigate the risk of a similar event occurring again.

The new requirements, including information about liquidity, large exposures and stress testing, presented a challenge to the financial officers and IT departments of all banks, including the UK offices of foreign banks, whether they were branches or subsidiaries. One of the objectives of the AFB is to provide a forum to discuss issues such as these and to help members to understand how their peers are addressing common challenges. Indeed members of the CFO Technical Committee regularly discuss how they are adapting systems and procedures to generate the new information and the successes they have achieved.

This AFB survey looks at how our members are now addressing their MIS requirements and by looking back at previous AFB technology surveys we can track the progress they have made. From the 56 responses we received, it seems that there has been considerable change to IT infrastructure, particularly in data warehousing, in order to address deficiencies. There is still too much dependence on the spreadsheet with its inherent control and efficiency weaknesses, but banks who have invested in BI (Business Intelligence) technology are substantially reducing that.

By and large, our members, or at least those who responded, are satisfied that they are now making progress towards meeting the new demands of management and regulators. In partnership with the suppliers of generic and specialist banking IT systems they have successfully risen to the challenge that was set for them.

In order to achieve this, AFB members have had a particular hurdle to overcome, which their UK domestic banks counterparts have not: foreign owners and their head office systems! Too often in the past, the information needs of overseas branches have been a low priority for



head office IT departments. This has changed, however, since the 2008 storm. It has become imperative, both for operational and reputational reasons, to respond to the demands of overseas (UK) regulators and to allow proper local management control of foreign branches. The pendulum has swung and now many of us have a much greater say in the development of local and central systems.

We are greatly indebted to Oracle Financial Services whose sponsorship made this fascinating survey possible.

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ON BEHALF OF THE CFO COMMITTEE
 ASSOCIATION OF FOREIGN BANKS
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Contents

FOREWORD.....i

TABLE OF CONTENTS.....ii

LIST OF TABLES.....ii

INTRODUCTION 1

IN-DEPTH INTERVIEWS..... 2

 A blank canvas 2

 Complex trading operations 2

 Head office vs local management reporting requirements..... 3

 Centralised vs local systems 3

RESPONDENTS 4

REPORTING REQUIREMENTS..... 6

 Regulatory 6

 Statutory Accounts 6

 Management Reporting..... 7

TECHNOLOGY EMPLOYED 8

 Core Systems..... 8

 Data warehouses..... 10

 Business Intelligence/Reporting Systems..... 10

 Technology Development..... 11

USE OF TECHNOLOGY FOR REPORTING 12

 Spreadsheets..... 13

REPORT PRODUCTION AND EFFICIENCY 15

NEW CHALLENGES AND PROBLEM AREAS..... 17

CONCLUSIONS..... 18

List of Tables

| | |
|--|--|
| Table 1 Business Activity..... 4 | Table 18 System Development Decisions..... 11 |
| Table 2 Business Plans 4 | Table 19 It Development Plans..... 11 |
| Table 3 Business Size..... 4 | Table 20 Technology Elements..... 11 |
| Table 4 Trading Operations..... 5 | Table 21 Reporting Technology..... 12 |
| Table 5 Head Office Location..... 5 | Table 22 Market Risk Reporting Method By Number Of Trading Systems..... 12 |
| Table 6 Age Of Operations 5 | Table 23 Spreadsheet Policy..... 13 |
| Table 7 Fsa Compliance..... 6 | Table 24 Risk Reporting With Spreadsheets 13 |
| Table 8 Management Reporting 7 | Table 25 Financial Mi Using Spreadsheets 14 |
| Table 9 Management Reporting Complexity 7 | Table 26 Formal Report Production 14 |
| Table 10 Treasury Core Systems..... 8 | Table 27 Re-Keying Data For Spreadsheets..... 14 |
| Table 11 Corporate Banking Core System Users 8 | Table 28 Reporting Automation..... 15 |
| Table 12 Corporate Lending Core Systems 8 | Table 29 Report Production Efficiency 15 |
| Table 13 Trade Service Core Systems 9 | Table 30 Mis Satisfaction 16 |
| Table 14 Overhead + Fixed Asset Management Systems..... 9 | Table 31 Problems In Mi Production 17 |
| Table 15 General Ledger Systems..... 9 | Table 32 Problems vs Satisfaction 17 |
| Table 16 Business Intelligence/Reporting Systems..... 10 | Table 33 Problems vs Trading Desks..... 17 |
| Table 17 Specialist Reporting Systems..... 10 | |

Introduction

The AFB Management Information Systems Survey, the latest in a series of surveys into AFB members' use of IT, was initiated by the AFB Operations Committee in early 2011. The committee had identified a growing demand for management information and therefore the need for consequential development of systems to meet that demand. The research brief was to look at how members were coping with the increased requirements and deploying MIS technology as one element of their response.

The Operations Committee invited the CFO Committee to become involved and the latter took over the role of leading the study. Cambridge Corporate Management Ltd (CCM) was invited to carry out the research and report on the findings.

The research was undertaken in two phases. In the first phase six banks were interviewed in depth; the results of these interviews were used to help design the questionnaire for completion by a larger number of members between mid June and the end of July 2011. When the survey was closed, 56 members had completed it, including the six banks that had been interviewed originally.

The in-depth interviews identified a number of factors which might affect the scale of the reporting challenge and different technology strategies to meet that challenge.

First, the type and complexity of banking operations may affect the difficulty of the task. For example, a member with several trading desks involved in complex derivative instruments will have a greater challenge than one simply engaged in syndicated loan participation. The corporate structure of a bank's UK operations, whether a branch, subsidiary or multiple subsidiaries, is also a factor.

The age of operations also appeared to be important with the younger banks having taken advantage of improved MIS technology and banking systems as against to the legacy systems to which the older operations may be tied.

The nature of the relationship with parent banks also played a role. Some parents will demand management information aligned to their group reporting; others will accept standalone subsidiary reporting.

One of the significant challenges for the banks interviewed was limiting the use of spreadsheets, which are difficult to audit and where the quality of information is hard to control. The banks interviewed had varied success in achieving this goal, but none had eliminated it entirely.

Based on these findings the quantitative survey was designed by CCM in consultation with members of the AFB CFO Committee; the survey was entirely online and all AFB members were invited to participate. The survey opened in mid June and closed on 31st July 2011.



A member with several trading desks involved in complex derivative instruments will have a greater challenge than one simply engaged in syndicated loan participation.

In-depth Interviews

The six in-depth interviews were with members of the AFB CFO Committee who volunteered to participate. The selection was far from random; one "correction" to the sample was made in order to include a North American bank. The characteristics of the banks concerned differed slightly from the 56 banks that completed the online survey (see the next section, Respondents) in two ways:

1. Geographically, there were fewer European banks:

| | |
|---------------------|---|
| Africa | 1 |
| Europe | 1 |
| Far East | 1 |
| MENA | 2 |
| North America | 1 |
2. On average they employ more people in their UK operations and have more trading desks per bank.

Here are some key observations from the interviews:

A blank canvas

One bank is significantly different from the other five: it has only been operating in the UK for three years, it is a subsidiary rather than a bank, it offers relatively few services and has only one trading desk. Its MIS was designed to support a wider range of services envisaged in the bank's development plans.

This bank has the most efficient and flexible MIS set-up of all six banks interviewed because it had been able to take full advantage of current technology, including a data warehouse, regulatory and generic reporting systems and a universal banking core system. Moreover it is independent of its owners in terms of IT and head office reporting requirements are quite simple. From the outset it had a structured approach to MIS development, rigorously identifying user requirements and thereby establishing a suite of standard and ad-hoc reports to cover almost all eventualities.

Nonetheless it does not escape spreadsheet reporting altogether; but when spreadsheets are used, pre-developed macros and data import protocols provide a controlled environment.

Complex trading operations

At the other end of the complexity spectrum, the largest bank interviewed has 20 trading desks and as many trading systems to support them. This has led to the development of a labyrinthine systems infrastructure, involving large numbers of data warehouses, each of which is connected to multiple if not all the trading systems. The various reporting requirements are satisfied by referencing a combination of data warehouses using different reporting tools. When a new report is required either for regulatory or management purposes, the bank may have to create a new data warehouse again connected to multiple trading systems, since to adapt existing facilities would be more difficult and probably would take too long to meet the compliance deadline.

Although to an outsider this seems like a nightmarish situation, the bank appears to cope with this modus operandum. In the online survey, although it scored itself lowest in terms of report production efficiency and reported the most significant problems, it declared itself to be "neither satisfied nor dissatisfied" with its MIS set-up. But to extract itself from the predicament and restructure its IT would be a costly and risky project; perhaps this is the reason for the neutral position, knowing that the cure might be more distressing than the disease.

Head office vs local management reporting requirements

Although regulatory requirements can present a significant challenge, the banks interviewed generally found that management reporting created more of a workload. There were markedly different views with regard to the relative difficulty of meeting local versus head office requirements.

The requirement to report risk and performance by product line was the most significant differentiator. For some their head offices mandate this "slice and dice" analysis which is regarded as unnecessary locally. For others it is exactly the other way round, with local management requiring more complex reporting than head office.

Centralised vs local systems

The use of a group system infrastructure, or centrally selected local systems, is often a bone of contention for foreign banking operations. Two of the banks we interviewed are required to depend upon their head offices for the facilities needed to produce their reports, and they complained about the difficulty in getting the central IT departments to develop solutions to local reporting requirements, particularly regulatory compliance.

However one bank is in the process of transferring its core banking system to a new head office facility. Local management are looking forward to it; their view is that the difficulties they have in meeting head office management information requirements, can now be thrown back to the central IT department, thus absolving themselves of the responsibility.

Respondents

56 of the AFB's 170 members responded to the survey. Based on previous surveys, they are a representative sample of the total membership. The business activity they reported confirms the profile of the foreign banks as corporate rather than retail banks, with trade services a common offering. Almost all respondents reported a significant treasury function and half participated in capital markets.

Question: Please categorise the importance of the following areas in terms of contribution to the business

| | Critical | Important | Regular | Minimal | Not offered |
|-----------------------------------|----------|-----------|---------|---------|-------------|
| Treasury | 24 | 23 | 5 | 1 | 3 |
| Corporate | 10 | 20 | 14 | 5 | 7 |
| Retail Lending | 5 | 8 | 2 | 8 | 33 |
| Corporate Lending | 21 | 24 | 4 | 5 | 2 |
| Trade Services/Finance | 11 | 15 | 12 | 7 | 11 |
| Retail Banking | 9 | 5 | 7 | 8 | 27 |
| Private Banking | 0 | 8 | 5 | 5 | 38 |
| Capital Markets (inc Derivatives) | 10 | 14 | 3 | 8 | 21 |
| Fund Management | 1 | 3 | 1 | 6 | 45 |

Table 1: Business Activity

Looking to the future (three year plans) very few banks are looking to reduce operations. As a proportion of those offering particular services, private banking and trade services providers signalled the most increases as well as all five fund management providers.

| | Planning Increases | Offering Service | |
|------------------------------------|--------------------|------------------|------|
| Treasury/Wholesale | 18 | 52 | 35% |
| Corporate | 21 | 44 | 48% |
| Retail Lending | 9 | 15 | 60% |
| Corporate Lending | 26 | 49 | 53% |
| Trade Services/Finance | 25 | 38 | 66% |
| Retail Banking | 12 | 21 | 57% |
| Private Banking | 9 | 13 | 69% |
| Capital Markets (inc. Derivatives) | 15 | 27 | 56% |
| Fund Management | 5 | 5 | 100% |

Table 2: Business Plans

In terms of size, the range was broad and included a greater proportion of large operations than in previous studies. This may reflect the relative importance of MIS issues in larger organisations. Similarly most operated more than one trading desk to support their treasury or capital markets operations.

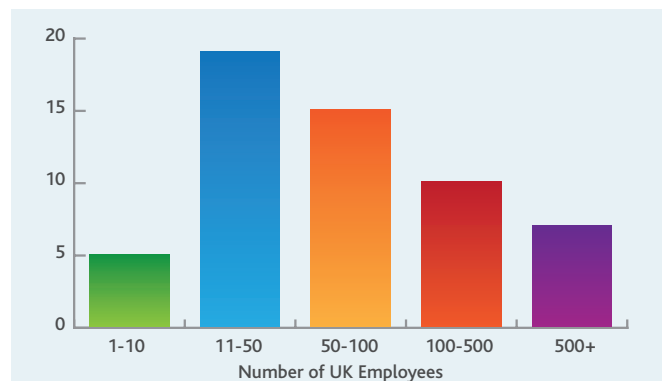


Table 3: Business Size

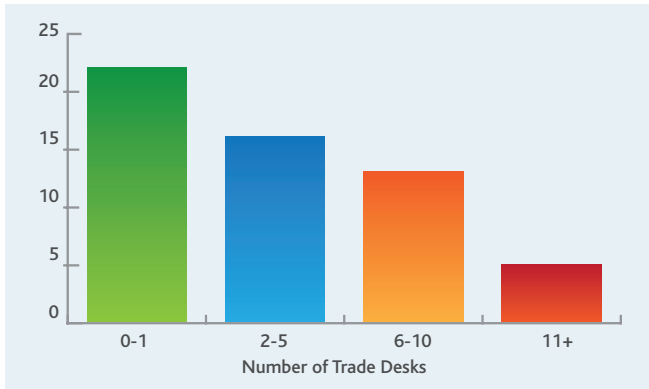


Table 4: Trading Operations

The banks' parents were spread across 34 countries with only Germany represented more than three times. Analysed by region, half were European and all but four were banks.

| Region | Count |
|---------------|-------|
| Africa | 5 |
| Central Asia | 3 |
| Europe | 28 |
| Far East | 9 |
| MENA | 7 |
| North America | 2 |
| South America | 2 |

Table 5: Head Office location

The corporate status of the UK operations was mostly bank branch (41) as opposed to limited company (15) or rep office (2). The total is more than the 56 respondents, because organisations were asked to identify all descriptions that applied. Only two described themselves as both branch and limited company, but eight branches also reported having subsidiaries or financial vehicles, two having 20 each.

The age of the operations ranged from 1-250 years, the latter as a result of a foreign bank purchase of a long established UK merchant bank. The age distribution is shown below:

| Age Range (years) | Count |
|-------------------|-------|
| 0 – 10 | 10 |
| 11 – 20 | 11 |
| 21-30 | 16 |
| 31+ | 19 |

Table 6: Age of Operations



The business activity they reported confirms the profile of the foreign banks as corporate rather than retail banks, with trade services a common offering.

Reporting Requirements

Regulatory

54 of the 56 respondents are required to report to the FSA; of the remaining two one was not a 'proper' bank and one was a rep office. The FSA reporting requirements varied substantially:

| Compliance Area | % reporting to FSA |
|---------------------------------|--------------------|
| Liquidity | 83% |
| Capital Adequacy | 38% |
| Large Exposures | 30% |
| Mifid | 43% |
| TCF (Treating Customers Fairly) | 42% |

Table 7: FSA Compliance

Some of this is difficult to explain. For example, of the 14 banks claiming that retail banking was a critical or important service they offered, five were not reporting to the FSA on TCF.

Of the 54 FSA reporters, 14 had to supply multiple reports for different entities under their umbrella.

All but seven reported to the Bank of England. Again it is not clear why these seven were exempted; one of them was required to report to the FSA. Five banks reported directly to the regulatory authority in the country of their parent, but all of these also reported to the FSA and all but one also reported to the Bank of England. All but three supplied information to their parents for consolidation into parent regulatory returns.

Statutory Accounts

30 respondents did not file statutory accounts in the UK, all being branches without subsidiaries or rep offices. Of the 26 who did, 12 applied UK GAAP accounting standards and 14 IFRS.

All but seven respondents said they provided statutory accounts consolidation data to their head offices. The accounting standard for head office reporting was mainly IFRS (71%); nine of these also provided accounts to GAAP standards. In all 21 (43%) produced consolidation accounts to the GAAP standard of the head office country.

The frequency of head office reporting was mainly monthly (57%) with 31% reporting quarterly and a handful half-yearly or annually.



Five banks reported directly to the regulatory authority in the country of their parent, but all of these also reported to the FSA and all but one also reported to the Bank of England.

Management Reporting

Question: For the following categories of management information, how do you report? (Tick all that apply)

| | By business line/ product | By corporate entity | Consolidated across corporate entities | By customer |
|------------------------|---------------------------|---------------------|--|-------------|
| P&L/Balance Sheet | 34 | 31 | 14 | 14 |
| Credit Risk | 23 | 26 | 8 | 30 |
| Market Risk | 29 | 27 | 11 | 13 |
| Performance e.g. RORAC | 31 | 25 | 11 | 11 |

Table 8: Management Reporting

The complexity in management reporting depends upon how the information has to be 'sliced and diced'. We asked members what they were required to do for four types of information. Unsurprisingly, customer analysis was most common in credit risk reporting whereas P&L/balance sheet reporting was more likely to be consolidated across entities and analysed by product line and entity than the other three information types.

The average number of reporting methods for each information class was 1.5. Over half the respondents, however, only had one way to report each class reflecting the relatively simple nature of their operations, whereas one had to report all classes in every way.

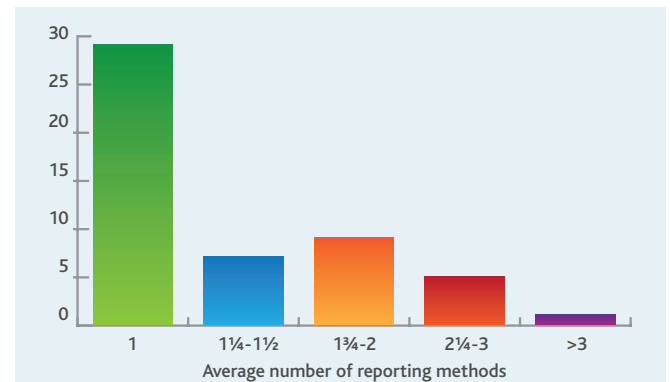


Table 9: Management reporting complexity



Technology Employed

Core Systems

We asked respondents to identify the core systems they use for the different services they provide. In many cases so called universal systems are deployed for more than one or all of the services provided. Examples are:

- Oracle Flexcube
- Misys Midas
- Temenos T24
- IBIS (recently acquired by Temenos)

Historically Misys and IBIS dominated the foreign banks market in the UK, but in recent years Oracle and Temenos have been eroding their market share.

Specialised core systems are more likely to be used for treasury, trade services and capital markets.

The services most commonly offered by the foreign banks are treasury, corporate banking and lending and trade services.

| System | Users |
|-----------------------|-------|
| K+TP | 9 |
| Midas/MidasPlus | 6 |
| Equation | 5 |
| IBIS | 5 |
| In-house | 3 |
| Calypso | 2 |
| Summit/Misys | 2 |
| Others (one instance) | 16 |
| Total | 48 |

Table 10: Treasury Core Systems

48 of the 53 banks offering treasury services identified the core systems they used. Three had in-house developed systems and the remainder package solutions. 22 packages were named of which six appeared more than once. Reuters K+TP topped the table with nine occurrences, followed by Misys' universal systems, six Midas and five Equation.

For corporate banking and corporate lending, Misys' Midas is the clear leader, but for the first time in an AFB technology survey, Oracle's Flexcube has shown the strength of its challenge coming second equal with the declining IBIS. This questions the success of Temenos in converting its acquired IBIS customer base to its T24 universal system.

| Ranking 2011 (2008) | System | 2011 | 2008 |
|---------------------|-----------------|------|------|
| 1 (1=) | Midas/MidasPlus | 9 | 11 |
| 2 (5) | Flexcube | 5 | 4 |
| 3 (3) | IBIS | 5 | 7 |
| 4 (4) | Equation | 4 | 5 |
| 5 (1=) | In-house | 4 | 11 |
| 6 (2) | T24 | 2 | 3 |
| 7 (-) | IFS Bankware | 2 | 0 |
| | Others | 8 | 18 |
| | Total | 39 | 59 |

Table 11: Corporate Banking Core System Users

| System | Users |
|-----------------------|-------|
| Midas/MidasPlus | 11 |
| Flexcube | 5 |
| IBIS | 5 |
| LoanIQ | 4 |
| Equation | 3 |
| T24 | 3 |
| In-house | 2 |
| Others (one instance) | 10 |
| Total | 43 |

Table 12: Corporate Lending Core Systems

For trade services Oracle's Flexcube tops the table, with the specialist system Eximibills a close second. Seven of the 38 banks offering trade services said they had no system for these operations.

| System | Users |
|-----------------------|-------|
| Flexcube | 5 |
| Eximibills | 4 |
| IBIS | 3 |
| T24 | 3 |
| Trade Innovation | 3 |
| IFS Bankware | 2 |
| In-house | 2 |
| Others (one instance) | 9 |
| Total | 31 |

Table 13: Trade Service Core Systems

Compared to previous studies the use of core systems by foreign banks for their most common services appears to have increased significantly. For example, only five out of the 48 respondents who offered corporate lending services did not use a core system to manage the operation. Historically the use of spreadsheets was widespread.

This could be a sample skew (examined in more detail later in this report), but if not it bodes well for the effectiveness of AFB members' operations.

Also of note is the declining proportion of banks using proprietary systems, so that only a handful of respondents in our sample use proprietary software rather than relying on the specialist suppliers of banking systems.

With regard to the management of overhead costs and fixed assets, nine cited using their core banking systems, plus a possible four more with in-house systems, which could also have been banking systems.

Three use spreadsheets and 22 reported using no system at all, although it is possible that some of the latter either used core systems or spreadsheets. Of those using separate accounting systems, SAP (5 + 1 Core System) just edged Oracle with two PeopleSoft and two Oracle Accounts.

| System | Users |
|-----------------------|-------|
| SAP | 6 |
| In-house | 4 |
| Excel | 3 |
| IBIS | 3 |
| IFS Bankware | 2 |
| Midas / MidasPlus | 2 |
| OPICS | 2 |
| Oracle | 2 |
| PeopleSoft | 2 |
| Others (one instance) | 8 |
| Total | 34 |

Table 14: Overhead + Fixed Asset management systems

We asked respondents if they had general ledger (GL) systems separate from their core banking systems. 15 did, Oracle being a clear leader with five PeopleSoft and three Oracle GL systems, to four SAPs.

| Systems | Users |
|--------------------|-------|
| Peoplesoft | 5 |
| SAP | 4 |
| Oracle GL | 3 |
| SUN | 1 |
| Flexi | 1 |
| Head office system | 1 |
| Total | 15 |

Table 15: General Ledger systems

Data warehouses

Given the multiplicity of core systems, accounting systems and GLs that many banks maintain, the use of data warehouses separate to the banking systems is becoming increasingly necessary. In our sample of foreign banks, 30 (54%) declared they used separate data warehouses, of which 13 had more than one. One respondent claimed as many as 20.

Of the 30 banks with separate data warehouses 22 said their warehouses were connected to more than one core system, in other words consolidating data from different systems. Of these 22, 15 also claimed that some of their core systems were connected to more than one data warehouse.

Business Intelligence/Reporting Systems

19 respondents said they had generic business intelligence (BI) or reporting systems. Of these 15 also had data warehouses separate to their core banking systems.

IBM was the dominant supplier, with 11 of the 23 systems cited. Some respondents had more than one generic BI system.

| System | Users |
|-------------------------|-------|
| IBM TM1 | 7 |
| SAP Business Objects | 5 |
| IBM Cognos | 4 |
| Oracle Hyperion | 2 |
| In-house | 2 |
| Other (single instance) | 3 |
| Total | 23 |

Table 16: Business Intelligence/Reporting systems

Far more respondents (45) used regulatory reporting systems, with four having more than one. Lombard Risk leads the supplier table with Logica's r-Frame second, although now equalled by Wolters Kluwer since its acquisitions of both FRS Global and SPRiNG.

| System | Users |
|--------------------------|-------|
| Lombard Risk | 16 |
| r-Frame | 11 |
| FRS | 6 |
| SPRiNG | 5 |
| Fermat | 2 |
| FiRe | 2 |
| In-house | 2 |
| Others (single instance) | 5 |
| Total | 49 |

Table 17: Specialist Reporting systems

Technology Development

Do foreign branches/subsidiaries have any say in the choice of their technology? According to this survey, the balance of decision making rests with the head office but, perhaps surprisingly, local autonomy appears stronger when the head office is in Europe or North America compared to Africa and the Far East.

Question: Were your systems (in general) selected by you locally or by head office?

| Region | All Head office | Mostly Head Office | Mostly Locally | All Locally | Local Autonomy Score |
|---------------|-----------------|--------------------|----------------|-------------|----------------------|
| North America | | | 2 | | 10 |
| MENA | 1 | 2 | 2 | 2 | 3 |
| Europe | 4 | 11 | 10 | 3 | -1 |
| Central Asia | 1 | 1 | | 1 | -3 |
| Far East | 1 | 5 | 2 | 1 | -3 |
| Africa | 1 | 3 | 1 | | -8 |
| South America | 1 | 1 | | | -15 |
| Total | 9 | 23 | 17 | 7 | -2 |

Table 18: System Development Decisions

Relatively few respondents had plans over the next four years for significant changes to their IT systems to improve their reporting capability, suggesting a level of satisfaction with current capability confirmed later in the survey.

Question: Do you have plans to change your IT systems significantly to improve Management Information/Reporting?

| Timescale | Respondents |
|-----------|-------------|
| 0-1 Years | 12 |
| 1-2 Years | 9 |
| 2-4 Years | 3 |
| No | 32 |

Table 19: IT Development Plans

Of the 24 planned changes just over half involved data warehouses and slightly fewer business intelligence systems. The plans were mostly short term.

Question: Do those plans include new or upgraded?

Tick all that apply

| | 0-1 Years | 1-2 Years | 2-4 Years | Total |
|-------------------------------|-----------|-----------|-----------|-------|
| Business Intelligence systems | 6 | 4 | 1 | 11 |
| Data warehouses | 6 | 4 | 3 | 13 |
| Middleware | 2 | 3 | 1 | 6 |
| Core Systems | 2 | 3 | | 5 |

Table 20: Technology elements

Of the drivers for change, 19 out of the 24 cited management demand (for information) eclipsing regulatory pressures (7) and changing statutory requirements (5). The greater difficulty in meeting management's information demands over third parties' was echoed later in the study; production of management information for head office was declared to be the least efficient of all types of reporting.

Use of Technology for Reporting

Question: What do you use as the main means of outputting the following reports

| Category | Report | Core System | Separate General Ledger | BI or reporting system | Specialist Reporting System | Spreadsheet/Manual | Other | N/A |
|------------|------------------------------|-------------|-------------------------|------------------------|-----------------------------|--------------------|-------|-----|
| Statutory | | 14 | 4 | 6 | 10 | 14 | 0 | 8 |
| Regulatory | Liquidity | 9 | 2 | 5 | 22 | 9 | 1 | 8 |
| | Capital Adequacy | 5 | 1 | 5 | 15 | 4 | 0 | 26 |
| | Large Exposures | 9 | 0 | 2 | 13 | 6 | 1 | 25 |
| | Mifid | 5 | 0 | 3 | 9 | 7 | 4 | 28 |
| | TCF | 9 | 1 | 2 | 6 | 8 | 2 | 28 |
| Management | P&L by entity | 18 | 4 | 8 | 2 | 17 | 1 | 6 |
| | P&L by business line/product | 19 | 2 | 8 | 3 | 16 | 1 | 7 |
| | Credit Risk | 20 | 0 | 4 | 12 | 14 | 2 | 4 |
| | Market Risk | 13 | 0 | 3 | 16 | 16 | 1 | 7 |
| | Single Customer View | 16 | 0 | 7 | 10 | 13 | 3 | 7 |
| Total | | 137 | 14 | 53 | 118 | 124 | 16 | 154 |

Table 21: Reporting Technology

Which elements of their systems’ inventories did our respondents use as the main mechanism for outputting different types of report? Core systems are the overall leader but only by a small margin from spreadsheets, closely followed by specialist reporting systems. (The use of spreadsheets is examined in more detail later in this report.)

Unsurprisingly, specialist reporting systems are the most commonly used for regulatory reporting, but they also play a significant role in management risk reporting, particularly market risk. From the case studies we learnt that some banks align their management risk reporting with FSA models, enabling them to perform the task in the same way for both recipients. Generic business intelligence or reporting systems were used less frequently as a primary mechanism; this is to be expected given the relatively small number of installations compared to specialist reporting systems (23 vs 49) in the survey sample. On a per installation basis the usage is roughly equivalent. Conversely the use of general ledger systems for outputting reports is low even when the infrequency of their availability is considered.

Market risk reporting is anecdotally one of the bigger challenges. As might be expected the greater the number of trading systems, the more complex the task. There was a strong correlation between the sophistication of the reporting technology and the number of different trading systems:

| Main means of outputting market risk reporting | Average number of different trading systems |
|--|---|
| Other | 5.0 |
| Specialist Reporting System | 3.0 |
| BI or Reporting System | 1.7 |
| Core System | 1.6 |
| Spreadsheet/Manual | 1.3 |
| N/A | 0.7 |
| All respondents | 1.9 |

Table 22: Market Risk reporting method by number of trading systems

Spreadsheets

The use of spreadsheets in MIS is of concern to banks and their auditors because of the potential for error, lack of security and the difficulty of exercising control. We first asked about the respondent's bank policy regarding spreadsheets:

Question: Does your company permit the use of complex spreadsheets for operational, reporting or other purposes?

| Policy | Respondents |
|--|-------------|
| In accordance with controlled procedures | 29 |
| Not at all | 7 |
| Where required | 20 |

Table 23: Spreadsheet Policy

Only in seven instances was the use of spreadsheets prohibited and for 20 a pragmatic if lax 'when required' policy recognised the difficulty in avoiding their use. 29 had established procedures to control their use.

Respondents were asked the extent to which they used spreadsheets for:

- Transaction Reporting
- Measuring and Reporting Risk
- Manipulation of data from core systems
- Compiling Financial MI

On transaction reporting, which we investigated by business area, very few respondents admitted significant use even in corporate lending for which previous studies have revealed numbers of banks relying entirely on spreadsheets to manage their books. Likewise only seven respondents said they used them 'somewhat' or 'significantly' in capital markets and derivatives transaction recording, whereas anecdotally many banks struggle to record complex derivative transactions in their core systems.



Of even greater concern was the manipulation of data from core systems; 26 respondents used spreadsheets 'significantly' and 15 'somewhat'.

Question: To what extent do you use spreadsheet applications for measuring and reporting risk?

| | Not at all | To a very small extent | Somewhat | Significant use | Primary Mechanism |
|--|------------|------------------------|----------|-----------------|-------------------|
| Interest rate risk (e.g. VAR calculations) | 21 | 13 | 12 | 7 | 3 |
| Liquidity risk (e.g. cash flow ladders or simulations) | 12 | 11 | 20 | 9 | 4 |
| Credit risk | 17 | 17 | 12 | 10 | 0 |
| Operational risk | 21 | 6 | 16 | 11 | 2 |

Table 24: Risk Reporting with Spreadsheets

By contrast for measuring and reporting risk, the use of spreadsheets was widespread, particularly in the areas of liquidity and operational risk where over half the respondents used spreadsheets 'somewhat', 'significantly' or as the 'primary mechanism'.

Of even greater concern was the manipulation of data from core systems; 26 respondents used spreadsheets 'significantly' and 15 'somewhat'.

Similarly, although perhaps of less concern, there was much spreadsheet use in compiling financial MI, where most reported 'somewhat' or greater use in all the areas investigated.

Question: Do you use spreadsheet applications for compiling financial MI? (as opposed to manipulation of data from core systems prior to ultimate distribution to users)

| Function | Not at all | To a very small extent | Somewhat | Significant use | Primary Mechanism |
|---|------------|------------------------|----------|-----------------|-------------------|
| To compile financial reports from underlying ledgers | 8 | 5 | 16 | 18 | 9 |
| In developing budgets and forecasts | 3 | 2 | 16 | 20 | 15 |
| Preparing customer MI from underlying records | 12 | 13 | 15 | 11 | 5 |
| As a "front end" reporting tool taking data from an underlying system | 14 | 7 | 12 | 16 | 7 |

Table 25: Financial MI using spreadsheets

We asked about the mechanism for preparing certain formal reports. Here the spreadsheet was used most followed by Microsoft Word™, with spreadsheets the application of choice for consolidation packs and Word for annual reports and BIS.

Question: How do you prepare formal reports?

| | As a Word document with tables | As a spreadsheet | Other application | N/A |
|---------------------------|--------------------------------|------------------|-------------------|-----|
| Annual (quarterly) Report | 20 | 13 | 9 | 14 |
| Consolidation pack | 8 | 29 | 13 | 6 |
| Pillar 3 document | 12 | 6 | 6 | 32 |

Table 26: Formal Report Production

One cause of both error and inefficiency is the need to re-key data. Although only one bank reported significant re-keying some 36% admitted to having to re-key 'somewhat', which would probably give cause for concern.

Question: Do you need to re-key data in order to populate your spreadsheets?

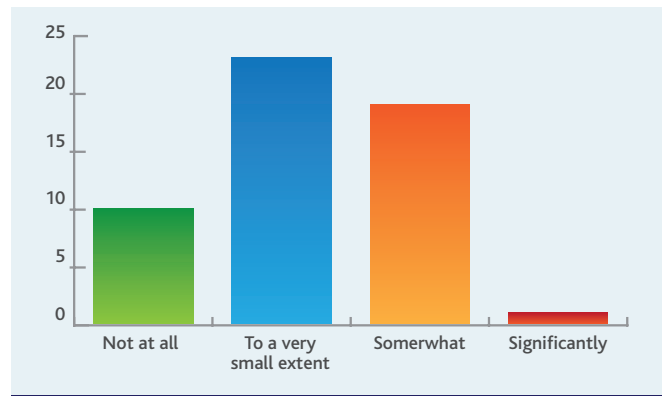


Table 27: Re-keying data for spreadsheets

And finally on the matter of spreadsheets, we asked if, in the last six months, they had suffered an embarrassing reporting error which could be attributed to the control weaknesses inherent in the use of spreadsheets. Clearly a sensitive question and only one respondent admitted to a significant problem (but which had been contained internally), although almost half did admit to minor issues.

Report Production and Efficiency

We asked respondents about the extent to which they had automated the production of five different types of report.

Question: What types of management information require the most production effort?

| | Fully automated | Mostly automated some manual input | Some automation significant manual input | Little or no automation | N/A |
|------------------------------|-----------------|------------------------------------|--|-------------------------|-----|
| P&L by entity | 11 | 30 | 4 | 2 | 9 |
| P&L by business line/product | 7 | 24 | 13 | 4 | 8 |
| Credit Risk | 12 | 25 | 12 | 4 | 3 |
| Market Risk | 12 | 23 | 8 | 7 | 6 |
| Single Customer View | 12 | 20 | 10 | 7 | 7 |

Table 28: Reporting Automation

Overall some 20% of reporting was said to be fully automated. P&L by entity had the least manual intervention, with single customer view requiring the most closely followed by P&L product line analysis.

Data warehousing would appear to be an enabling technology in automating certain types of reporting. For market risk reporting, 81% of those with data warehouses said they were mostly or fully automated against 56% of those without.

A slightly different question, asking about the four different types of information, produced similar efficiency scores, with regulatory proving the most efficient and head office management information the most inefficient.

Question: How efficient would you assess to be your production of the following:

| | Very efficient | Efficient | Labour-intensive | Very Labour-intensive |
|------------------------|----------------|-----------|------------------|-----------------------|
| Statutory | 9 | 30 | 17 | 0 |
| Regulatory | 10 | 35 | 11 | 0 |
| Local Management | 7 | 33 | 15 | 1 |
| Head Office Management | 5 | 31 | 18 | 2 |

Table 29: Report Production Efficiency

Overall, respondents viewed 70% of their report production as efficient or very efficient which was surprisingly high given anecdotal evidence and the results of the six in-depth interviews. There are a number of explanations:

1 It could be true; when taken through the steps of the survey, respondents may be able to see the wood from the trees and take a dispassionate view of the effectiveness of their operations. Often day-to-day discrete problems can create a disproportionately dim assessment of the whole. This is echoed in their reported satisfaction with their MIS set-up where only 25% said they were dissatisfied.

Question: Overall how satisfied are you with your current MIS set up?

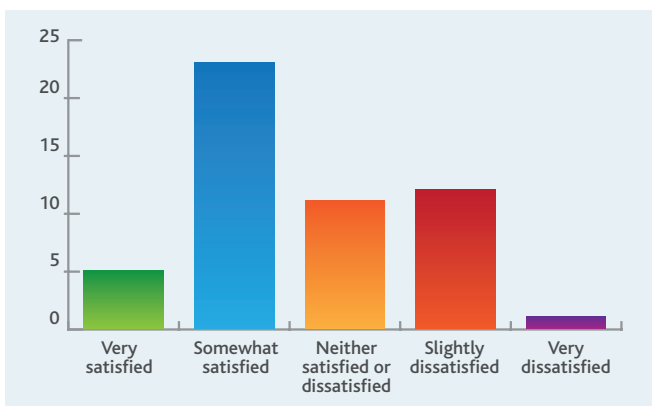


Table 30: MIS Satisfaction

2 The sample could be skewed towards the more efficient report producers. Banks with significant report production issues may have been discouraged from participation.

3 Finally, despite the anonymity of the study, respondents might have played down their problems and be less satisfied than they admit.

If the sample were skewed, then we might get some clues by comparing it with the respondents of the previous AFB technology surveys. First the previous (2008) survey had 30% more responses which might indicate a reluctance by those with less effective MIS systems to participate.

The other major difference between the two surveys was the respondents' use of in-house systems, markedly lower in the current study. It could, therefore, be that the users of inflexible legacy systems, having the greater problems producing management information, were more reluctant to participate.

We analysed the reported MIS efficiency and MIS satisfaction against different factors:

- Business Activity
- Size
- Age of business
- Use of technology (BI, data warehouses, spreadsheets etc)

There was no significant correlation with any of the factors examined.



If the sample were skewed, then we might get some clues by comparing it with the respondents of the previous AFB technology surveys.

New Challenges and Problem Areas

Only 25% of our respondents had identified upcoming challenges which would create a significant additional MI production burden for their bank. 12 of these 14 identified some 18 issues. Three were cited three times, these being:

- Basel III
- Liquidity
- IFRS

Question: How much of a problem do the following cause your bank in MI Production?

| | No problem | Some issues | Significant problem | Major headache |
|---------------------------------------|------------|-------------|---------------------|----------------|
| Ad-hoc reporting | 7 | 41 | 7 | 1 |
| Systems limitations | 6 | 35 | 14 | 1 |
| Head office-imposed systems changes | 9 | 35 | 10 | 2 |
| Accounting standards changes | 15 | 32 | 8 | 1 |
| Changes in the regulatory environment | 1 | 40 | 12 | 3 |
| Changes in business activity | 8 | 39 | 8 | 2 |
| Corporate restructuring | 28 | 22 | 5 | 1 |
| Reconciliation between systems | 17 | 34 | 4 | 1 |

Table 31: Problems in MI Production

We asked respondents about a range of possible issues relating to existing problems. There were relatively few major headaches and of the 12 cited, nine of these were mentioned by just two respondents. Of the 'significant problems', systems limitations, regulatory changes and head office imposed systems changes were cited most frequently.

Here there was a correlation with MIS satisfaction; the more 'significant problems' and 'major headaches' there were, the less satisfied the respondents were with their MIS capability.

| 'Major headaches' + 'significant problems' reported | Respondents | Average satisfaction rating (Very satisfied = +2, very dissatisfied = -2) |
|---|-------------|---|
| 0 | 27 | 0.6 |
| 1 | 10 | 0.2 |
| 2 | 5 | 0.4 |
| 3 | 5 | 0.4 |
| 4 | 6 | -0.2 |
| 6 | 1 | -1.0 |
| 7 | 2 | 0.0 |
| Overall Satisfaction Rating | | 0.4 |

Table 32: Problems vs Satisfaction

There was also a strong correlation between the number of trading desks and the number of 'significant problems' and 'major headaches' reported. As would be expected, those banks with many desks integrating trading data from a number of different systems face more of a challenge when information requirements change.

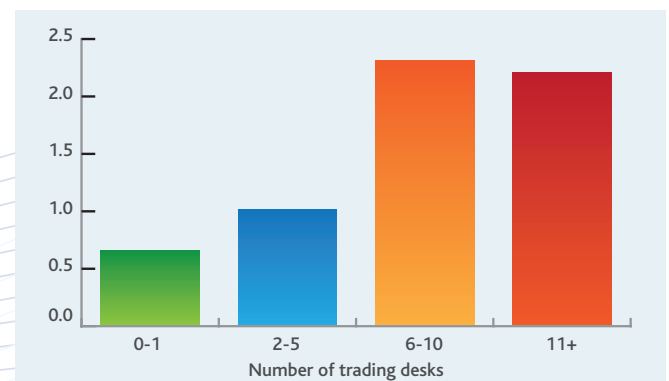


Table 33: Problems vs Trading Desks

Conclusions

As has been confirmed in previous studies, the foreign bank community is mainly focussed on corporate banking services rather than retail, with a significant proportion engaged in capital markets in the UK. The regulatory and management reporting requirements of the banks, therefore, differ from the domestic banks with large retail operations. They are complicated, however, by the need to satisfy regulators in both the UK and the country of their parent and the information requirements of local and head office management.

To respond to these requirements the banks have equipped themselves with a broad inventory of information technology including core banking systems (mainly package rather than in-house), data warehouses, specialist reporting and business intelligence systems. Nevertheless, they resort to the use of spreadsheets to supplement this capability to varying degrees in every aspect of their reporting, despite the risk of error and inefficiency.

Our respondents were by and large, not too dissatisfied with their MIS operations, which conflicts with the anecdotal evidence of banks experiencing difficulties in providing the necessary reports. This level of satisfaction was not affected by the type, size or age of the business. It appears that despite the complexity of the requirements, they believe they are meeting the information needs reasonably efficiently and that together with suppliers of both generic and specific banking solutions, they have constructed IT resources that meet the challenge. It may be that the foreign banks that did not respond to the survey were less satisfied with their MIS performance than those who did, and if this is the case, then there may be some clues as to what makes a successful solution.

First, the use of specialist reporting systems to meet regulatory requirements seems to be a must. Almost all our respondents had them; they were used mostly as the primary means of producing regulatory reports, which was perceived as more efficient than the other classes of information. This makes sense; effectively outsourcing the need to maintain a system to meet the ever changing stipulations of the FSA is the only sensible solution for small banks.

Secondly, core systems are the main engines for management reporting as well as service delivery. Overall they were still more likely to be the primary means of generating reports for management than specialist

and generic reporting systems together. Some will be more flexible and better at report generation than others, but our sample size did not allow us to discern which systems these were. Our sample, however, did have significantly fewer in house core systems than in previous AFB technology surveys, and if those with in-house systems were reluctant to participate, it may mean that they are not as effective as package solutions in producing management Information.

Thirdly, the appropriate use of data warehouses to overcome the inflexibility of core system databases, allows banks to use the generic and specialist reporting systems on which they rely for more than half their statutory, regulatory and management reporting. Inflexible systems were the biggest issue reported in this study. The 2008 AFB Technology Survey found only 30% of respondents using data warehouses, although a further 30% planned to use them in the next three years, i.e. by 2011. In this survey, 54% had data warehouses in use, suggesting that almost all those planning to implement this technology in 2008 had done so.

The role of BI or generic reporting systems in this success story is not so clear from the survey, but it is interesting to note that of the nine respondents who used spreadsheets as a primary mechanism for compiling information from underlying ledgers, NONE had BI systems. Although those with BI systems had not eliminated significant use of spreadsheets, it does appear they had substantially reduced it. If banks are required to reduce their dependency on spreadsheets in the future (the FSA's guidance on the use of user-developed applications will be a factor) then the wider deployment of business intelligence tools is a likely consequence.



It may be that the foreign banks that did not respond to the survey were less satisfied with their MIS performance than those who did, and if this is the case, then there may be some clues as to what makes a successful solution.



The AFB, founded in London in 1947, provides a forum for the sharing of information on industry issues for the mutual benefit of foreign banks operating in and out of the United Kingdom and makes effective representation to industry, government, regulatory bodies and other peer group associations to ensure the attainment of good international practice.

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